Briefings on Forest Issues

April 2003

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About the Society of American Foresters

Gifford Pinchot and six other pioneer foresters founded the Society of American Foresters (Society, SAF) in 1900. The Society, with more than 18,000 members, is the national organization representing the forestry profession in the United States. SAF includes public and private scientists and practitioners, administrators, educators, and forestry students as its members. It is also the accreditation authority for professional forestry education in the United States.

The mission of the Society of American Foresters is to advance the science, education, technology, and practice of forestry; to enhance the competency of its members; to establish professional excellence; and to use the knowledge, skills, and conservation ethic of the profession to ensure the continued health and use of forest ecosystems and the present and future availability of forest resources to benefit society.

Society members subscribe to a code of ethics, the foundation for their professional behavior in relations with the land, the public, their employers (including clients), and with each other. Stewardship of the land is the cornerstone of the forestry profession. As such, SAF members advocate and practice land management consistent with ecologically sound principles.

The Society publishes the *Journal of Forestry*, *The Forestry Source, Forest Science*, *Southern Journal of Applied Forestry*, *Northern Journal of Applied Forestry*, *Western Journal of Applied Forestry*, and P*roceedings* of the Society's national convention.

Forest Resource Facts

The 2000 RPA Forest and Rangeland Assessment completed by the USDA Forest Service is a comprehensive overview of the demand for and supply of the United States' public and private forest resources. The assessment found that increases in population, average income levels, and public interest in natural resources has lead to added pressures on the resource base. The assessment also provided information on the nation's forest resources including timber, water, range, forage, outdoor recreation, wildlife and fish, and minerals.

Resource Base—The United States has approximately 747 million acres of forest land (Smith, 2001). Of this, over half (54.2 %) is in non-industrial private forest land, one-quarter is in federal ownership, ten percent is in industrial ownership and ten percent is in other public ownership.

Approximately 84 percent of the public owned forest land is in the West and 67 percent of the privately owned forest land is in the East. The Great Lakes states have the highest proportion of state and county land. There has been an increase in the proportion of forest area in smaller ownership units nationwide making landscape level planning increasingly difficult.

The growth-removal ratio on forest lands exceeds 1.0 for both hardwoods and softwoods; however, the United States is expected to remain a net importer of timber products for the foreseeable future. Canada is likely to remain the primary source of these imports and will provide for roughly one-third of U.S. lumber consumption over the next fifty years.

There are approximately 571,000 rangeland acres found in the United States, of which, one-third is in federal ownership. Of the remaining two-thirds in non-federal ownership, 61 percent are found in the Rocky Mountain region. The Bureau of Land Management manages 27 percent of these lands with the Forest Service managing roughly 7 percent.

Timber—Our Nation's dependence on wood increases as population levels continue to multiply. Since 1965, the per capita consumption of wood and paper products has increased approximately 30 percent.

To meet this demand, the United States has 504 million acres of classified forest land that is capable of producing at least 20 cubic feet per acre per year and is not withdrawn from timber utilization by statute or administrative regulation (Smith et al., 2001). Close to 90 percent of the total output from these forest lands comes from private ownership with 1 in 4 of these private lands managed with timber production as the primary management objective. The amount of harvest from National Forest System lands will remain stable at 800 million cubic feet through 2050.

Meeting the nation's demands has been achieved through innovative advances in the area of wood utilization. Since the early 1950's, it is estimated that there has been a 39 percent increase in the amount of wood and paper products produced per cubic foot of wood input. Because of advances in wood utilization, U.S. consumers in the 1990's were provided with numerous goods and services. For each 1 billion cubic feet of timber harvested, consumers were provided with::

- 88,031 new homes
- 5.2 million tons of pulp, paper, and paperboard products
- 24.7 million new shipping pallets
- 121 trillion Btu's of wood energy
- 3.7 million tons of other wood products, such as furniture and telephone poles.

Water—Public and private forests play a critical role in providing the nation with clean and safe water for consumptive uses, recreation, and aquatic habitat. As population increases test many of our natural resources, so too will pressure be placed on water resources in forests. As the demand for off-stream water needs multiplies, instream flows decrease, causing environmental conflicts and potential injury to aquatic resources.

On the 191 million acres of National Forest System lands, there are approximately 128,000 miles of fishable streams and rivers, over 2.2 million acres of lakes, ponds, and reservoirs, and 12,500 miles of coast and shoreline. The water quality in 3 out of 4 of the Nation's assessed river miles, lake acres, and estuarine areas can support the "aquatic life use" designated under the Clean Water Act (Loftus and Flather, 2000).

Range Forage—Management of USDA Forest Service rangelands will continue to be oriented to vegetation management, with multiple uses as the

desired output mix (Mitchell, 2000). In addition to providing forage, rangelands provide recreational opportunities for many people, conserve biodiversity, provide sources of clean water, and store carbon.

With the total amount of grazing land expected to slowly decline over the next 50 yrs, livestock grazing is expected to follow. It is estimated that beef cattle and sheep consume approximately 431 million animal unit months of grazed forages each year (Mitchell, 2000).

Outdoor Recreation and Wilderness—The national forests play a unique role in providing recreational opportunities. In the National Forest System today, there are 18 national recreation areas, 7 national scenic areas, 4 national monuments, 133 scenic by-ways, 96 wild and scenic rivers, 4 national scenic or historic trails and over 100,000 heritage sites representing over 10,000 years of history. Many of these lands are available to the public for recreational purposes. The proportion of privately owned forest land open to the public and free of charge, however, has declined since 1979 to 15 percent in 1996 (Cordell, 1999).

In 1995, more than 9 out of 10 people in the United States participated in some form of outdoor recreation. The most popular recreation activities were the ones that could be enjoyed close to home without large outlays of time or money and do not require high levels of specialized skills (Cordell, 1999). Due in part to projected rising incomes, the number of participants in most recreation activities is projected to increase.

In 1997, approximately 53 million acres of forest land were classified as reserved (Forest land withdrawn from harvest by statute or administrative regulation) including wilderness areas on Federal and State lands and national parks (Smith et al., 2001). As much as 1 in 5 acres of National Forest Systems land is classified as wilderness and area continues to be added to the National Wilderness Preservation System. Visitor use of wilderness areas is expected to grow by as much as 1 percent per year for the next 50 years (Cordell 1999).

Wildlife and Insects—Range lands, forest lands, and wetlands support a wide variety of species. There is an estimated 419 native species of mammals, 281 species of reptiles, 240 species of amphibians, and 800 freshwater species in the United States. Of the forest dependent species, 187 have been found to occupy a reduced portion than their former ranges. Growing human populations could add to this number as humans compete for limited ecosystem goods and services provided by forests and rangelands.

Threatened and endangered species are found across the nation. Areas with high amounts include the Ozark Highlands, the Great Plains from Nebraska to North Dakota, the central California Coast, and the Washington- Oregon border (Hof et al., 1999). As development pressures remain and exotics species continue to invade, the struggle to delist many forest and nonforest dependent endangered and threatened species will remain.

The United States contains an estimated 58 million acres of forests that are expected to have twenty- five percent higher than normal mortality rates for the next fifteen years as a result of insects. In 1998 alone, over 54 million acres of forested land were affected by various insect and diseases. There are 70 major insect pests in the United States, 19 of which are exotics.

Minerals—The nation's forests and rangelands are underlain with extensive supplies of metallic and precious metals sufficient enough to accommodate domestic demand through the middle of this century. Many of the mineral reserves found under federal lands are protected by certain restrictions to protect surface resources. The U.S. economy consumes over $132 billion annually of domestically produced and reclaimed minerals and metals (Shields et al. 1996). Increasing population is expected to lead to net increases in demand for most minerals by 2050, while production of minerals and energy commodities in the United States decreases. Nonetheless, National Forest System Lands remain a major producer of many commodities.

Biological Diversity in Forest Ecosystems

Background Biological diversity has evolved over time through the influence of ecological processes, including historical disturbance regimes such as fire, flood, wind events, and insect infestation. Human activities that affect biological diversity include disruption of ecological processes (e.g., fire regimes), conversion of forest to alternate land uses, introduction of exotic species, fuelwood gathering, subsistence agriculture, and forest management.

Since the beginning of the profession, foresters have attempted to meet human demands by managing for a sustained yield of commodities in perpetuity. Today, a more comprehensive view of sustainability has emerged in which sustained yield of wood and fiber is one of several goals. This view of sustainability includes concerns about relationships among human uses of forests, biological diversity, ecosystem processes, and economic and social well-being.

Forest management practices have evolved to produce commodities, enhance recreational opportunities, maintain the quality of water derived from forested watersheds, imitate and restore ecological processes, and protect critical habitat. The impact of these practices on biological diversity is a function of the temporal and spatial scales of management actions rather than of the activities themselves.

Foresters should recognize the context of their operations and its potential implications for biological diversity. Within forest-dominated landscapes, contextual considerations may include attributes of the mosaic of forest structural classes, the diversity of native tree species, and the distribution of features (e.g., abiotic features, retention areas, corridors, edges) within and among stands.

Issue Biological diversity is a basic characteristic of forests that has economic, social, and ecological implications. Accelerating human demands on natural systems have engendered concern about balancing land use with objectives related to biological diversity, including providing adequate forested habitat for various species dependent on forest ecosystems. Forests should be managed within the context of other factors that affect them, including ownership objectives, human needs, natural disturbances, introduced species, and land-use changes such as urban encroachment.

Position Professional foresters can contribute to the management of landscapes for biological diversity by virtue of their knowledge, training, and experience. The SAF supports forest management approaches that consider the interaction of biological diversity with other forest ecosystem characteristics, including human and natural disturbances. This requires not only selecting appropriate management practices, but associated challenges incorporating biological diversity considerations into planning, monitoring, education, research, and data collection and analysis.

The SAF believes active forest management can play a role in maintaining this diversity by approximating ecological processes that have been disrupted.

Clearcutting

Background Clearcutting is a forest regeneration method used to produce even-aged stands. It consists of cutting essentially all trees, producing a fully exposed microclimate for the development of a new age class. The method was introduced in Germany in the 1700s where overuse of single-tree cutting had retained trees of low value and resulted in poor forest quality. Its primary objectives are to produce forest products and re-establish even-aged stands of relatively shade-intolerant species.

The applicability of clearcutting varies depending on: (1) type of ownership; (2) landowner objectives; (3) shade tolerance of the desired tree species; and (4) site-specific conditions such as visual sensitivity, slope, and the presence of sensitive wildlife species.

Failure to use clearcutting can have long-term implications for achieving desired forest conditions and land management objectives. For example, in the absence of natural fire regimes, shade-intolerant species are likely to decline in ecosystems unless regenerated by clearcutting. Clearcutting plays an important role in creating and maintaining biological and structural diversity.

Several forest management and regulatory agencies and industry associations have soug

The Forest Inventory and Analysis (FIA) Program

Background The FIA program provides the primary source of data for comprehensive assessments of the Nation's forest resources, and is fundamental to policy development and wise stewardship. FIA is the only program that monitors the extent, condition, uses, impacts of management, and health of the forest ecosystems across all ownership's in the United States. The program provides comprehensive analysis of resource trends as a basis for improved resource management and protection.

FIA data serve as the foundation of large-scale policy studies and major economic and ecological management decisions, and perform a pivotal role in public and private forest planning. These data are in demand by government agencies, industry, and others. The FIA user community agrees that these data are essential to monitoring a healthy and productive forest ecosystem. A current and accurate forest ecosystem inventory is prerequisite to substantive discussion of issues like national forest policy, carbon sequestration, and ecosystem health.

Traditionally, the FIA program has periodically surveyed individual states, with remeasurements occurring anywhere from 6 to 18 years apart. The FIA user community has become increasingly concerned by the inability of the USDA Forest Service to improve the timeliness of FIA information, with obstacles including an increase in the number of variables measured in the field in response to public concerns about ecosystems and a flat budget.

As a less costly alternative, the Forest Service's FIA strategic plan offered a compromise that would reduce cost by decreasing the sampling intensity from that called for in the legislation, at a base of $57 million.

Inconsistent cycle times have been a long term user concern, perpetuated by the less expensive alternative program. Annual measurement would be 15 percent in the east and 10 percent in the west, with cycle lengths of approximately seven and ten years, respectively. Alternatively, a federally funded base program for the 20 percent annual measurement may be more equitable and consistent across all states.

Additionally, 82 percent of the work done by the FIA program is conducted on private and non-Forest Service public lands, with funding for the majority of this coming from the Forest Service Research budget.

A fundamental question remains, "will the alternative FIA program comply with Congress' mandate and does it address the broad-based, highly supportive FIA user community's desire for a consistently implemented national annualized inventory system?" It is the Society of American Foresters' opinion that the realization of a national annualized inventory system is not embodied in the Forest Service's proposed less costly alternative, but rather in the base level, federally funded annual inventory with 20 percent annual measurement consistently applied across all forest ownerships.

At this juncture, it is imperative not to lose sight of this nation's critical responsibility to assess the sustainability of its forests and provide wise stewardship. Broad consensus indicates that there has never been a greater need for timely, comprehensive, reliable inventory data on the Nation's public and private forests. The science of annual inventory is sufficiently advanced, the operational infrastructure is coming together, and the Forest Service's FIA program is the sole provider for inventory data across all states and ownerships. Lack of full federal funding for the FIA program is the primary impediment to successful implementation.

Issue Current funding trends for the FIA program are inadequate to produce a truly annualized inventory program consistent with the Congressional mandate. In recent years less than one percent of the total Forest Service budget has been allocated to the inventory of the nation's forest resources.

Position The Forest Service's FIA program is the crucial source of information assessing the sustainability of the nation's forests. The Society of American Foresters believes Congress should provide $82 million for the Forest Service's FIA program by fiscal year 2003. This would ensure full federal funding for the program. This funding level will enable compliance with Section 253(c) of the 1998 Agricultural Research, Extension, and Education Reform Act which mandates that 20 percent of all plots be measured annually in each state, that the FIA program be integrated with the Forest Health Monitoring (FHM) program, and that data and reports be made available in a timely manner.

Herbicide Use in Forest Management

Background Research and experience have shown it is possible to significantly increase the growth of desired tree species by managing non-crop vegetation that compete for light, water, and nutrients. Vegetation management with herbicides may also be appropriate for achieving non-timber objectives such as enhancing wildlife habitat, watershed management, forage production for livestock, control of harmful weeds and non-native vegetation, protection from fire, and maintenance of rights-of-way and recreation sites. Science and professional practice have demonstrated that herbicides are a safe and effective method of managing forest vegetation. Herbicides can provide less overall risk than alternative vegetation control methods and often require less energy to implement.

Vegetative forest pests may be either exotic or indigenous to the local biotic community. Many exotic weeds are capable of aggressively colonizing forest ecosystems, thereby destroying habitat for native plants and animals. Such weeds are a growing threat to forest biodiversity throughout the U.S.

When weeds conflict with forest management objectives, herbicides should be considered along with other vegetation management alternatives, such as prescribed fire; manual, mechanical, or biological clearing; and weed mats, in developing an integrated vegetation management strategy. Upon evaluating alternative combinations of treatments, foresters should identify the ecological conditions that are promoting weed expansion and determine the most efficacious, environmentally sound, and cost-effective solutions for controlling the weed problem.

Training in the properties and appropriate use of herbicides is very important for foresters involved in all aspects of herbicide programs. Forest herbicide users must maintain appropriate licensing or certification as required by each state in which they operate.

The amount of herbicide used in forestry and other applications in the U.S. is very small compared to agriculture, which comprises 83%. Environmental effects must be evaluated, however, to ensure that specific herbicides can be safely used in the forest. Evaluation of risk associated with the use of any chemical requires consideration of its toxicity, the potential for exceeding exposure to a specified dose over a specified time period, and the minimization of undesired effects (i.e. off-site herbicide movement) on the environment.

The Society of American Foresters supports, in principle, the registration process employed by the EPA, as directed by Congress, in regulating the effects of herbicides on the environment and public health. The registered application rates of herbicides currently used on forestlands are very unlikely to produce acutely toxic responses in non-target organisms, unless these organisms are plants. The modes of action (targeted to plant processes), short persistence, lack of accumulation in food chains, and rapid excretion by animals of forest herbicides minimizes chronic exposure.

Because herbicides applied at operational rates pose no health threat to most animals, the greatest effect of herbicides on wildlife will result from changes in the plant component of the habitat. It should be pointed out, however, that little is known about the impacts of surfactants (used to improve the dispersing, absorbing, spreading, sticking and/or penetrating properties of the spray mixture) and other adjuvants (additives), both of which are used in combination with different applications of herbicides. More research is needed to understand their impacts.

Foresters have an obligation to protect the health and safety of the public, forest workers, and the environment. This includes ensuring the competent use of herbicides and/or seeking guidance from qualified experts, posting appropriate public notification, and complying with all provisions of herbicide labels and following all applicable federal, state, and local laws and regulations.

Issue Herbicide use is one of several vegetation management alternatives. Although proven effective and environmentally responsible, their use in forest management remains controversial.

Position The Society of American Foresters supports the judicious use of herbicides in forest management as part of an integrated vegetation management strategy. Herbicides registered by the EPA and applied according to label directions and federal and state regulations are an environmentally safe option for managing undesired vegetation.

Roads in Forests

Background Most forest roads are constructed to access timber, but often support other purposes, including allowing access for forest management activities, recreation, rural travel, fighting forest fires, and controlling outbreaks of pests and diseases. Roads also provide access to other commodities, such as oil, natural gas, minerals, livestock grazing, and special forest products.

Roads represent an environmental challenge. Drainage from roads can cause erosion and reduce water quality. Roads can help the spread of forest diseases, exotic plants and other pests, and fragment wildlife habitat. Many of the challenges roads present can be overcome through proper design, construction, use, location and maintenance. A well-maintained network of roads is an asset for good forest management, while a poorly designed or inadequately maintained network is a liability.

Roads in the National Forest System have become a controversial issue, and the condition of existing roads is of real concern to the Society of American Foresters. Roads within the system should meet minimum standards, regardless of which public agency or organization is charged with their maintenance, in order to prevent the breakdown of the entire system and to minimize liability. According to the Forest Service, three quarters of the agency's roads are more than 50 years old, and 60 percent are being maintained below Forest Service standards. The Forest Service needs to ensure these roads are safe and that they are not causing environmental damage.

Current laws mandate that the Forest Service develop a management plan for each unit of the National Forest System, and require management for seven separate purposes—water, wildlife, recreation, timber production, grazing, minerals, and wilderness. To implement these plans, forest managers must have access to their forests through a well-maintained road system, requiring a substantial, dependable road budget for maintenance and reconstruction.

When it comes to roads, the Society of American Foresters' primary concern is maintaining an infrastructure to address the health of forests. There is no doubt that roads are a critical part of helping maintain healthy forests, however, the environmental implications of roads must be considered. A poorly planned road or a road in a serious state of disrepair can contribute to undesirable environmental and social conditions.

Issue The practice of building roads in forests has generated significant controversy in recent years. This controversy involves several connected but distinct issues, including building roads in areas where there are currently no roads, the mechanisms available to pay for road construction to support forest management needs and opportunities, the maintenance of existing roads, and the environmental effects of road building. These issues have impacts on both public and private forest management.

Position The Society of American Foresters believes forest roads, properly constructed and maintained, are a critical part of forest management, emergency response, and recreation use, and are an increasingly important part of the rural transportation system. Roads should be constructed and maintained in an environmentally sound manner following standards, laws, and regulations. With the exception of wilderness and other protected forests, forest roads are an important asset in all forest ownerships, including both public and private forests, and should be seen as a capital investment.

Decisions about roads in public forests should be made at the local level, under an overarching legal framework. The manager on the ground, with input from the public, is able to make decisions about roads based on existing laws and regulations, the values the public holds for the forest, and the needs of the individual forest. Local concerns should be carefully considered when any public agency decides to modify the use of a road; at a minimum, the public should be notified.

Impacts on private, state, county, tribal, and other ownerships adjacent to federal lands should also be considered. This is particularly true when the federal government is legally required to allow access across federal lands to other ownerships.

Timber Harvesting on Federal Lands

Background The Society of American Foresters believes strongly in managing forests sustainably. Sustainability is consistent with current policies, and it requires simultaneously addressing economic, community, and environmental values.

National forest lands suitable for growing and harvesting timber are determined through an established comprehensive planning process requiring public involvement (National Forest Management Act of 1976). Before Forest Service or BLM managers can implement timber harvesting projects, the National Environmental Policy Act of 1970 (NEPA) mandates that environmental impacts must be assessed, adequately documented, and presented to the public for comments. Furthermore, timber-harvesting operations must protect water quality (Clean Water Act of 1972), and must neither jeopardize the recovery of threatened and endangered species nor adversely modify their habitat (Endangered Species Act of 1973). In addition, Forest Service managers must protect the diversity of plant and animal species (National Forest Management Act of 1976).

Economic benefits of timber harvesting include a supply of raw materials for conversion to consumer products and the employment of approximately 2 million people (about 1.5 percent of the total U.S. labor force), who depend on the forest products industries for jobs. Policies resulting in minimal federal timber harvesting, in concert with economic factors affecting the forest products manufacturing industry, can have undesirable socioeconomic effects associated with employment loss, especially in timber-dependent rural communities.

According to scientists representing the Ecological Society of America, "proposals to ban all timber harvesting on National Forests would leave managers without a valuable tool that can be used selectively to restore early successional habitat, reduce fuel loads, and contain pest and pathogen outbreaks in some forests". Excessive accumulation of fuels is a major problem on federal lands. Human health has been adversely affected by wildfire smoke, a situation that can be improved by fuel reduction treatments. Forest management can also produce benefits to the environment including enhanced wildlife habitat, improved water quality, and cleaner air.

Commercial and non-commercial timber harvesting have a role in management strategies, though the methods used should vary with different federal lands. Forest Service and BLM managers need all the tools available, including timber harvesting, to manage the nation's forest resources sustainably.

Issue Timber harvests on national forests declined by three-fourths during the 1990s, from 10.5 to 2.5 billion board feet (bbf). This is far below the long-term sustained-yield capability of national forest lands (12.16 bbf) and the Allowable Sale Quantity (7.56 bbf) established by land and resource management plans. Consequently, social well-being in many forest-dependent communities has declined along with employment and income. To achieve healthy, sustainable resources and protect human communities, hazardous fuels treatments are needed on millions of acres throughout the country, using prescribed burning, thinning, and other methods of reducing fuels. A substantial proportion of the forests needing fuel reduction treatments are on federal land, especially in the inland West, but the timber harvesting needed for fuel reduction is usually controversial.

Position The Society of American Foresters supports commercial and non-commercial timber harvesting on federal lands allocated for such use through land and resource management planning. Current harvest levels on federal lands are insufficient to maintain forest health, to meet the goals for hazardous fuel reduction to reduce wildfire risk in the nation's forests and provide economic and community benefits. Current laws offer more than enough protection to sustain the full range of forest values on public lands. Timber harvesting is a legitimate use of national forests and Bureau of Land Management (BLM) public lands, as the multiple-use mandates make clear.

Urban Forestry

Background Urban forestry is the integrated biophysical management of urban forest ecosystems for improving the quality of life. This includes the art, science and technology of managing trees and forest resources as an integral part of urban community ecosystems for physiological, sociological, economic and aesthetic benefits. Urban and community forestry play an important role in enhancing urban environmental quality by providing a multitude of benefits, such as enhanced aesthetics; improved air, water and soil quality; increased recreational opportunities; improved wildlife habitat; improved physical and mental health; and community strengthening and pride. Societal benefits include opportunities for forest resources education, economic and community betterment and development, and overall improvements to the quality of life in the urban setting. Urban forestry is a viable and complementary component of managing the nation's forest ecosystems and a viable part of urban ecosystems.

From small villages to large cities, urban and community forests include trees along streets, within greenbelts, greenways, parks, public spaces, residential yards and neighborhoods, and municipal watersheds. There are 70 million acres of such forests in the nation in communities where 80 percent of our citizens live. The unique demands on urban forests, their location within populated areas, and their potential as a medium to educate and engage the public in natural resource issues require unique management approaches.

While the decision to support urban and community forestry programs should not be based solely on economic criteria, the forests provide many economic benefits, including (1) reducing energy costs and demand through summer shade and winter wind protection, which will be increasingly important as fossil fuels become more scarce and expensive and global climate change occurs, (2) reducing water and air pollution (including CO_2), (3) increasing carbon storage, and (4) increasing property values.

Significant resources are required to establish and maintain urban and community forests. However, including these in municipal accounting systems will provide for long term maintenance of this natural capital asset at the municipal level, as specified under the Government Accounting Standards Board's (GASB) Ruling 34. Under planned and efficiently administered systems, the costs are far outweighed by the benefits.

Additionally, community trees and forests can help maintain air quality standards, thus helping communities avoid nonattainment status that would otherwise reduce their municipal bond rating and their ability to engage in continued development.

Issue It is uncertain whether existing programs will meet the increasing demand by urban communities; and whether sufficient financial support and long-term commitments exist for managing urban forest ecosystems sustainably. Concerns include unplanned intrusion and lost opportunities for design in urban sprawl and a lack of funding and need for the preservation of unique forest characteristics.

Position The Society of American Foresters (SAF) believes actions and practices that strengthen and improve the urban and community forestry discipline within the broader profession of forestry are vital to the social and economic well-being of the nation. The SAF strongly supports activities and funding levels that promote the establishment, maintenance and sustainability of healthy urban forest ecosystems for all urban communities. The SAF supports integrating the science and art of urban forestry into urban land use planning systems and related commitments. Prior to the establishment of an urban forestry program, a socioeconomic analysis needs to be done of the area and community involved. After implementation, a monitoring and evaluation plan should be developed to ensure program objectives are being met.

The Society believes that the sustainable management and use of urban forest resources requires appropriate policy, a modest regulatory framework, and forward-looking research and investment programs, as well as institutional strengthening to make government and private sector investments and partnerships in urban and community forestry more effective and efficient. The ultimate success of such programs will also depend upon the efforts of individual citizens from all ethnic and socioeconomic levels who, on a voluntary basis, participate with local, state, and federal governments to ensure program objectives are met.

Wildfire Management

Issue & Background Large, intense wildfires have proven difficult to control and have resulted in catastrophic damage to property and resources, and the tragic loss of lives. Suppression and rehabilitation costs have also increased significantly. And when fires occur in the proximity of residences, called the wildland-urban interface, risks and costs escalate. Education efforts are needed to inform citizens of the risks of living in wildland fire prone environments, and on how to protect their property, firefighters, and themselves from wildfire

181 million acres of U.S. forests and rangelands are at risk of catastrophic, high intensity fires. Following a national policy to quickly suppress fires, many forests have excessive fuel levels compared to historic conditions, when fire played a more prominent ecological role. The result is an increased risk of serious and potentially permanent ecological deterioration. In many areas it is impracticable to reintroduce fire without first reducing and/or rearranging the fuels.

The National Fire Plan was a policy response to widespread wildfires that burned across 8.4 million acres in 2000, mostly in the West. The need for effectively implementing the Plan was illuminated in 2002 when 6.7 million acres burned. These were the two largest fire seasons in the past 50 years, both doubling the 10-year average. The Plan's four goals are 1) improve fire prevention and suppression, 2) reduce hazardous fuels, 3) restore fire-adapted ecosystems, and 4) promote community assistance.

Position The Society of American Foresters (SAF) recognizes the key role fire plays in many forest and range ecosystems. The SAF believes active and comprehensive management of vegetation can reduce the risk of unacceptable wildfire losses. This approach is essential for sustaining the nation's forests and rangeland ecosystems and the values people expect from them. In support of the National Fire Plan, the SAF advocates:

1) Well funded and well trained fire management organizations that are capable of carrying out fire management activities including fuels management, prevention, education, and suppression in an effective and safe manner. Firefighter and public safety should be the first priority and should never be compromised.

2) A comprehensive approach to fuel management including the full range of silvicultural tools available to treat fuel composition, density, and structure. Appropriate silvicultural tools include mechanical manipulation, such as thinning and timber harvest, and fire. The use of selected tools should be carefully planned and implemented by qualified professionals, with full recognition of the effects, costs and benefits of the treatments. Fire, whether manager-ignited (prescribed) or naturally ignited fire used for management purposes, must be implemented within the guides of carefully prepared plans.

3) Timely rehabilitation activities following wildfires where appropriate. Timely rehabilitation reduces the risk of long-term soil damage from surface erosion and landslides. The removal of dead and dying trees reduces the fuel for reburns and recovers some of the economic value.

4) Efforts by natural resource and fire management agencies to coordinate with private landowners and tribal, state, and local governments to plan and implement strategies across ownerships, including education and training such as the FireWise program. This should be focused at the community level, as many of the people moving into the wildland-urban interface are not well informed on how to protect themselves and their property from wildfire, and especially the need to manage fuels.

Furthermore, the SAF advocates the use of prescribed fire where it can be effectively and safely used to restore and maintain desired forest and range conditions and reduce unacceptably high risks to human life, property damage, and resource values. However, due to highly successful suppression practices developed and implemented throughout much of the last century, as well as some land-use practices, many forests have accumulated too much fuel to use prescribed fire alone, and tree removal will be necessary. The SAF therefore recommends a comprehensive approach using restoration-based fuel reduction treatments, thus effectively combining goals two and three of the National Fire Plan. This will in some cases reduce the cost of fuel treatments over time by creating stand conditions less susceptible to crown fires and diminishing the need for frequent understory fuel treatments.

Executive Summary: *Forest of Discord: Options for Governing our National Forests and Federal Public Lands*

Conflict over land use and management is an enduring theme in history. Disputes over natural resources have sparked wars and armed conflicts around the world. In the United States we have left the battlefield for the courtroom —and the court of public opinion—but the conflicts are no less impassioned just because the adversaries advance their cause by brandishing laws and regulations instead of swords and rifles. The laws and regulations that govern the national forests and public lands are the accretion of 200-plus years of American democracy, but like the profession of forestry itself they have seen the most activity in the last century. Federal land management policy has lurched from conveyance to water protection and subsistence timbering, from multiple use to ecosystem protection—always reflecting change in public values—and each new policy overlays its predecessors. Moreover, the managers entrusted to make land-use decisions are constrained by the regulatory agencies charged with enforcing statutes like the Endangered Species Act and the Clean Water Act. As a result, the language that governs the public lands is sometimes contradictory, and clear direction about priorities is lacking. Even though the difficult resource allocation decisions have not been—perhaps cannot be—made, land managers struggle to design and implement plans for land use. The doctrine of multiple use, which seems to promise all things to all people, is intended to be their guide. But at which scale—both temporal and spatial—should managers make decisions? Using the national forests and the public lands
for a variety of purposes is not an unreasonable goal, but some uses are incompatible with others and cannot be achieved simultaneously or equally across a landscape. Multiple use has thus become an engine of conflict that pits one interest group against another and denies land managers a clear mandate. Some people argue that partisan politics has interfered with the work of the public land management agencies. Although the Forest Service may now seem less insulated from political whims—the possibility that future chiefs may undergo Senate confirmation would exemplify such a trend—a reading of history shows that both the Forest Service and the Bureau of Land Management (BLM) have often been caught in political crossfires. The problem maybe not politics itself but the political timeframe: election and budget cycles do not coincide with forest rotations or ecological processes. The challenge is to give land managers the tools they need to plan for the long-term resilience of the land in a political environment. Whatever the direction of the agencies and the twists and turns of politics, the most important legacy of the public land manager is the health of the land. The land can provide no more than it is capable of, and at times politicians and citizens expect too much. The difficulty lies in balancing the discretion of the professional with the preference of the public. Public sentiment will inevitably drive natural resource management on the public lands, and indeed, in our democracy, public lands ought to be managed for public purposes, consistent with ecologically sound principles.

But the laws and regulations intended to determine the highest and best use of the land, to react to changes in public sentiment, to resolve conflicting values—these arbiters have in many respects failed. The accretion of laws is like a leaky roof, and each law is like new shingles—of variable quality and longevity—nailed on top of the old; still the patched roof leaks. It is time to tear off all the shingles and lay a new roof.

The Issues In Forest of Discord: Options for Governing Our National Forests and Federal Public Lands, the Society of American Foresters analyzes the critical policy issues that successful legislative and regulatory reform must address. One fundamental problem is that the purposes of the national forests and public lands are no longer clear. Changing public values, court decisions, administrative agendas, and federal environmental laws have combined to emphasize biodiversity, ecosystem functions, and forest health. The land management statutes—last revised more than 20 years ago—no longer adequately convey the public purposes or the priorities for which these lands should be managed. No management planning process for the public lands and national forests can resolve basic differences in values. Congress and agency managers had assumed that a locally based, rational planning process would resolve those differences, but experience—including appeals and lawsuits—has proved the assumption wrong. Congress has never adequately defined the roles of local communities in implementing its broad legislative statements. Is this a bottom-up process in which each community selects its priorities? Or is it a top-down arrangement, in which Congress sets the

goals and the community has only a limited say? The planning process is also unclear about which decisions are made when and where. No public organization or management system can be effective without clearly articulated goals and an unambiguous decisionmaking process.

The purposes of public participation in federal resource management remain unclear. What is the goal? In some cases local public participation seems to have paralyzed implementation of agreed-upon national or regional policy goals.
Federal environmental laws and land management laws do not mesh well, and land managers must comply with the hundreds of sometimes-conflicting statutes, executive orders, and regulations that guide the planning process. Both natural resources monitoring and program implementation monitoring are currently inadequate. Despite the intensive data gathering, useful information about resource conditions and agency performance is often inadequate. Funding is not adequately related to management priorities, and new means must be found to fund resource management. Budgets are not linked to the resource management plans and resource monitoring plans, yet all three are tools in the management process. In short, the problems that exist are both serious and complex, and it is unlikely that regulatory reform can resolve them. Rather, new legislation is warranted. Our national forests and public lands represent an
American legacy, and because of their importance, new legislation should reflect bipartisan consensus.

The Solution Forest of Discord sets forth the options for change in three categories: clarifying the mission, improving the planning process, and financing land management.

Clarifying the mission

• Congress has the constitutional responsibility to set policy for the national forests and public lands and should act decisively to establish clear priorities for their management.The new legislation must clarify which of the many legitimate public values are most important.

• It is appropriate that national forests and public lands be managed flexibly to meet the changing needs of the nation. Congress should clearly articulate in new legislation that the concept of multiple use is not necessarily appropriate on every management unit, but may be better applied in the aggregate across the national forest and public lands.

• If Congress wants to retain sustained yield as a tenet, it must clearly say so and then broaden the definition to include all the legislated public values associated with the national forests and public lands.

• The federal land management agencies should be given broad authority and responsibility to meet all applicable environmental and legal requirements. Consultation is appropriate, but other federal and state agencies should not have the authority for approving land management activities.

Improving the planning process

• Resource management plans and subsequent monitoring strategies should provide an appropriate range of diverse, resilient aquatic and terrestrial communities.

• Resource management plans should identify and quantify (to the extent feasible) appropriate goals and outcomes, including vegetation management goals, and commodity and amenity outputs.

• The plans should compare and contrast the goals and outcomes with recent performance, highlighting situations where a significant change in direction is proposed.

• Plans should indicate expected financial performance and expected economic and environmental consequences (including economic and social stability, downstream air
and water quality and other environmental effects).

• The goals and outputs (including fiscal expectations and downstream effects) should be set forth in a manner that provides a basis for monitoring, evaluating, and reporting agency performance.

• Both citizen participation and professional discretion are important in resource management planning. Citizens clearly have a responsibility to make their wishes known, and professional resource managers have a duty to listen carefully to the public.

• Local public participation should enrich, not paralyze, implementation of national or regional policy goals. Congress must clearly define the role of local participation with regard to national policy directives. National and regional decisions should be shaped through national and regional participation.

• Both Forest Service and BLM forest planning regulations should identify the analyses and decisions that must be made at each planning level.

• Forest or area plans and resource management plans should identify necessary monitoring as well as the type, location, and intensity of measurements needed. Monitoring should be cost effective and should concentrate on key outcomes. The monitoring plan should be part of the decision document.

• Both Forest Service and BLM forest planning regulations should provide a systematic means for addressing new information, including the results of monitoring. This should include ways to preserve or

protect values of concern while the new information is examined for scientific validity and incorporated into analyses and decisions, but without overriding or invalidating the planned targets and budgets.

• Experimentation should be encouraged, but it should be limited to certain conditions. Authority for experiments should be constrained until the agencies have demonstrated that adequate controls are in place.

• Any legislation designed to improve the planning process should be clear in its relationship to existing planning legislation.

Financing Land Management

• A variety of experimental programs exist for collecting revenues from recreational users and nontraditional forest products. These programs should be expanded. If, for example, watershed management is reemphasized, Congress must address how to pay for it, or how it can pay for itself.

• Forest or area plans should explain how the goals and outcomes would be affected by differing budgets. Annual reporting on agency performance can then compare and contrast the goals and outcomes of the plan with the requested budgets and actual appropriations.

• Use of the trust funds and special accounts should be reviewed and modified if necessary. Administrative reform is warranted before legislative changes are considered. The agencies should use care to ensure that projects funded through these accounts meet the legislative intent Congress had when developing the accounts.

• Congress should continue to examine the adequacy of payments in lieu of taxes and other compensation programs to ensure that the states and counties are fairly and consistently compensated for the tax-exempt status of federal lands.

The issues are complex, and we do not begin to suggest that resolution will occur within one or two congresses. Rather, we hope that Forest of Discord: Options for Governing Our National Forests and Federal Public Lands can be used as a beginning for bipartisan discussion and policy development. After more than a century, the forest of harmony still seems to lie beyond our collective horizon. We hope that this and similar efforts will allow us to glimpse that forest among the trees of our disagreements.

1 Public lands are the lands described in Section 103 of Federal Land Policy and Management Act of 1976 FLPMA), i.e., those lands administered by the Bureau of Land Management